

IN THE CLAIMS

Please cancel Claims 1 and 8-11 without prejudice or disclaimer.

Claim 1 (cancelled):

Claim 2 (currently amended): The amplifier circuit recited in Claim 4 3, wherein the first stage quad configuration is modified using emitter degeneration.

Claim 3 (currently amended): An amplifier circuit, comprising:
a first stage and a second stage, the first stage comprising a quad configuration
and the second stage comprising a translinear current amplifier configuration; and
a coupling circuit operably coupling the first stage and the second stage,
~~The amplifier circuit recited in Claim 4~~, wherein the current gain of the second stage is given by:

$$(I_{A_{out1}} - I_{A_{out2}}) / (I_{out1} - I_{out2}) = (1 + R_{123} / R_{124}) \cdot (I_{135} / I_{134}) \cdot (A / (1+A))$$

where $A = g_{m Q109} \cdot R_{124}$;

$I_{A_{out1}}$ is the amplified output collector current from Q_{110} ;

$I_{A_{out2}}$ is the output collector current from transistor Q_{111} ;

I_{out1} is the output current from Q_{103} and Q_{105} from the first stage quad, and

I_{out2} is the collector current from Q_{104} and Q_{106} from the first stage quad;

R_{123} is the resistance value of the third resistor and R_{124} is the resistance value of the fourth resistor;

I_{135} is the current through the fifth current source; and

I_{134} is the value of the current through the fourth current source.

Claim 4 (currently amended): The amplifier circuit recited in Claim 4 3, further comprising current to voltage conversion and common mode feedback in the second stage operable to provide high speed, low distortion and extended bandwidth.

Claim 5 (currently amended): The amplifier circuit recited in Claim 4 3, wherein the amplifier is formed of bipolar devices.

Claim 6 (currently amended): The amplifier circuit recited in Claim 4 3 being adapted for use in an integrated circuit.

Claim 7 (currently amended): The amplifier circuit recited in Claim 4 3 being adapted for use in a variable gain amplifier.

Claims 8-17 (cancelled)